

RE1DN-D  
RESISTOR, DECADE

**1. GENERAL.** This procurement requires a six-decade decade resistor .

**2. CLASSIFICATION.** Type II, class 5, Style E, and Color R in accordance with MIL-T-28800 for shipboard applications. The power source requirements are not invoked.

**3. OPERATIONAL REQUIREMENTS.** The equipment shall provide selectable resistance values within the ranges, accuracy, voltage and power handling capabilities detailed below. The equipment shall meet all specified accuracies with input signals up to 1 kHz.

**3.1 Resistance range.** 0.1 to 111,111 ohms in 0.1 ohm steps.

**3.2 Accuracy.**  $\pm(0.02\%$  of indication) plus the zero resistance value from 0.1 to 111,111 ohms. Zero resistance:  $\leq 0.002$  ohms/decade.

**3.3 Power and current.** Each individual decade shall meet the applicable power and current handling requirements of Table I.

Table I. Power and current handling requirements

Decade	R/step	dc current	Power/step
1 ohm	0.1 ohm	1.6A	0.25W
10 ohms	1 ohm	0.7A	0.5W
100 ohms	10 ohms	230 mA	0.5W
1 kilohm	100 ohms	70 mA	0.5W
10 kilohms	1 kilohm	23 mA	0.5W
100 kilohms	10 kilohms	7 mA	0.5W

**3.4 Temperature coefficient of resistance.**  $\pm 20$  ppm/ $^{\circ}\text{C}$  maximum.

**3.5 Connectors.** Three-way binding posts with 19.05 mm (3/4 in) spacing. Resistance terminals must be isolated from case. A shield terminal is required.

**4. GENERAL REQUIREMENTS.**

**4.1 Weight.** 3.9 kg (8.5 lb) maximum.

**4.2 Lithium batteries.** Per MIL-T-28800, lithium batteries are prohibited without prior authorization. A request for approval for the use of lithium batteries, including those encapsulated in integrated circuits, shall be submitted to the procuring activity at the time of submission of proposals. Approval shall apply only to the specific model proposed.